Amendments to the Claims

Please CANCEL claim 11 without prejudice to or disclaimer of the subject matter recited therein.

Please AMEND claims 1, 16, and 19 as follows. All of the claims currently pending in this application, including those not presently being amended, are reproduced below in accordance with U.S. Patent and Trademark Office practice.

1. (Currently Amended) A method of removing mercury from mercury-containing exhaust gases emanating from an industrial process or a combustion process, said method comprising:

contacting the mercury in the exhaust gases with a sorbent material at a location where the temperature of the exhaust gases is higher than room temperature, wherein the sorbent material is hydrogen mordenite or hydrogen clinoptilolite, for adsorbing mercury and causing the mercury to react with the sorbent material to produce mercury-laden sorbent material.

2. (Original) A method according to claim 1, wherein the sorbent material is hydrogen mordenite.

3. (Original) A method according to claim 2, further comprising a step of heating the mercury-laden sorbent material to a temperature of at least about 400 °C so as to remove mercury from the mercury-laden sorbent material and to regenerate the sorbent material.

4. (Original) A method according to claim 3, further comprising a step of reusing of the sorbent material for mercury removal.

5. (Original) A method according to claim 3, further comprising a step of condensing mercury removed from the mercury-laden sorbent material.

6. (Original) A method according to claim 1, wherein the sorbent material is prepared by acid leaching mordenite or clinoptilolite.

7. (Original) A method according to claim 1, wherein the sorbent material is hydrogen clinoptilolite.

8. (Original) A method according to claim 7, further comprising a step of selecting a clinoptilolite stock, which can be ion exchanged and acid leached without degradation of the crystal structure.

9. (Original) A method according to claim 7, further comprising a step of disposing of the produced mercury-laden sorbent material.

10. (Original) A method according to claim 1, wherein the sorbent material is copper-impregnated hydrogen mordenite.

11. (Cancelled)

12. (Original) A method according to claim 1, wherein said step of contacting the mercury in the exhaust gases with the sorbent material occurs at a temperature higher than about 100 °C.

13. (Original) A method according to claim 1, wherein said step of contacting the mercury in the exhaust gases with the sorbent material occurs at a temperature higher than about 180 °C.

14. (Original) A method according to claim 1, further comprising a step of forming a particulate, fixed bed including the sorbent material, wherein said step of contacting of the mercury in the exhaust gases with the sorbent material is performed by conducting the exhaust gases through the fixed bed.

15. (Original) A method according to claim 14, further comprising a step of regenerating the sorbent material of the particulate bed by heating a portion of the sorbent material to a temperature of at least about 400 °C.

16. (Currently Amended) A method according to claim 15, wherein said ~~regeneration~~ step of regenerating is performed by removing a portion of the sorbent material from the bed.

17. (Original) A method according to claim 1, wherein said step of contacting of the mercury in the exhaust gases with the sorbent material is performed by conducting the exhaust gases through a honeycomb element system comprising the sorbent material as an effective constituent.

18. (Original) A method according to claim 17, further comprising a step of regenerating the effective constituent of the honeycomb element system by heating the element system to a temperature of at least about 400 °C.

19. (Currently Amended) A method according to claim 1 ~~18~~, wherein said step of contacting of the mercury in the exhaust gases with the sorbent material is performed by ~~further comprising a step of~~ providing an exhaust gas train that includes two parallel honeycomb element units for receiving the exhaust gases, each of the honeycomb element units comprising the sorbent material as an effective constituent and being heated to a temperature of at least about 400 °C.

20. (Original) A method according to claim 19, further comprising a step of regenerating one of the parallel honeycomb element units while simultaneously conducting the exhaust gases through the other unit.